

Patent  
SFTGB Docket No.: 19308.0028U1  
03SKY0029

### AMENDMENTS

This listing of claims replaces all prior versions and listings of claims in the application.

1           1.       (Currently amended)     A method for filtering a receive signal in a  
2       wireless receiver, comprising:  
3           providing a received signal to an amplifier; and  
4           filtering the received signal such that noise contributed by the filter is  
5       blocked from an output of the amplifier at a first frequency, wherein filtering at the  
6       first frequency is performed by applying a single voltage-to-current conversion and a  
7       single current-to-voltage conversion.

1           2.       (Original)     The method of claim 1, wherein noise contributed by  
2       the filter is passed to the output of the amplifier only at a frequency other than the  
3       first frequency.

1           3.       (Currently amended)     The method of claim 1, wherein the filter is  
2       comprises a frequency dependent negative resistance implemented using a general  
3       impedance converter.

1           4.       (Original)     The method of claim 3, wherein noise generated by the  
2       general impedance converter is blocked from the output of the amplifier at the first  
3       frequency.

1           5.       (Original)     The method of claim 4, wherein the first frequency is  
2       the in-band receive frequency.

Patent  
SFTGB Docket No.: 19308.0028U1  
03SKY0029

1           6.     (Currently amended)     A low-noise filter for a wireless receiver,  
2     comprising:  
3           an amplifier; and  
4           a filter comprising a single frequency dependent negative resistance  
5     implemented using a general impedance converter to realize a bi-quad filter, wherein  
6     the amplifier and the frequency dependent negative resistance perform a voltage-to-  
7     current conversion and a current-to-voltage conversion, respectively at a first  
8     frequency.

1           7.     (Currently amended)     The low-noise filter of claim 6, wherein the  
2     general impedance converter further comprises:  
3           a pair of operational amplifiers arranged such that a non-inverting input of a  
4     first amplifier is coupled to an inverting input of a second operational amplifier; and  
5           at least one capacitance configured to prevent noise generated by the pair of  
6     operational amplifiers from appearing at an output of the amplifier at a the first  
7     frequency.

1           8.     (Original)     The low-noise filter of claim 7, wherein the first  
2     frequency is the in-band receive frequency.

1           9.     (Original)     The low-noise filter of claim 8, wherein noise  
2     generated by the pair of operational amplifiers appears at the output of the amplifier  
3     at a second frequency.

1           10.    (Original)     The low-noise filter of claim 9, wherein the second  
2     frequency is an out-of-band receive frequency.

Patent  
SFTGB Docket No.: 19308.0028U1  
03SKY0029

1           11.   (Currently amended)   A portable transceiver, comprising:  
2           a modulator configured to receive and modulate a data signal;  
3           an upconverter configured to receive the modulated data signal and provide a  
4 radio frequency (RF) signal;  
5           a transmitter configured to transmit the RF signal; and  
6           a direct conversion receiver including an amplifier and a filter, the filter  
7 comprising a single frequency dependent negative resistance implemented using a  
8 general impedance converter to realize a bi-quad filter, wherein the amplifier and the  
9 frequency dependent negative resistance perform a single voltage-to-current  
10 conversion and a single current-to-voltage conversion.

1           12.   (Currently amended)   The portable transceiver of claim 11,  
2 wherein the general impedance converter further comprises:  
3           a pair of operational amplifiers arranged such that a non-inverting input of a  
4 first amplifier is coupled to an inverting input of a second operational amplifier; and  
5           at least one capacitance configured to prevent noise generated by the pair of  
6 operational amplifiers from appearing at an output of the amplifier stage at a first  
7 frequency.

1           13.   (Original)   The portable transceiver of claim 12, wherein the first  
2 frequency is the in-band receive frequency.

1           14.   (Original)   The portable transceiver of claim 13, wherein noise  
2 generated by the pair of operational amplifiers appears at the output of the amplifier  
3 stage at a second frequency.

1           15.   (Original)   The portable transceiver of claim 14, wherein the  
2 second frequency is an out-of-band receive frequency.

Patent  
SFTGB Docket No.: 19308.0028U1  
03SKY0029

1           16.   (Currently amended)   A portable transceiver, comprising:  
2           means for modulating a data signal;  
3           means for upconverting the modulated data signal and provide a radio  
4 frequency (RF) signal;  
5           means for transmitting the RF signal;  
6           means for converting a received signal to a baseband signal; and  
7           means for filtering the baseband signal so that noise generated by the filter  
8 means is prevented from appearing on the received signal at a first frequency,  
9 wherein the means for filtering performs a single voltage-to-current conversion and a  
10 single current-to-voltage conversion.

1           17.   (Original)   The portable transceiver of claim 16, wherein the first  
2 frequency is the in-band receive frequency.

1           18.   (Currently amended)   The portable transceiver of claim 17,  
2 wherein noise generated by the filter means appears on the received signal at a  
3 second frequency.

1           19.   (Original)   The portable transceiver of claim 18, wherein the  
2 second frequency is the out-of-band receive frequency.